

What is claimed is:

1. A method of installing a fenestration unit, the method comprising the steps of:

5 creating a rough opening in a composite panel having an insulating core, the rough opening having a perimeter larger than an outer perimeter of a frame of the fenestration unit;

positioning the fenestration unit inside the rough opening; and

10 delivering a foam material into at least a portion of a space between the perimeter of the frame of the fenestration unit and the perimeter of the rough opening of the composite panel, the foam material fixedly adhering the fenestration unit to the insulating core of the composite panel.

15 2. The method of claim 1 wherein the foam material provides a sole structural attachment between the fenestration unit and the composite panel when the foam material is substantially cured.

20 3. The method of claim 1 wherein the foam material provides at least 50% of an attachment force that resists separation of the fenestration unit from the composite panel along a direction generally perpendicular to a major surface of the composite panel.

25 4. The method of claim 1 wherein the foam material provides about 80% of an attachment force that resists separation of the fenestration unit from the composite panel along a direction generally perpendicular to a major surface of the composite panel.

30 5. The method of claim 1 wherein the foam material provides about 95% of an attachment force that resists separation of the fenestration unit from the composite panel along a direction generally perpendicular to a major surface of the composite panel.

6. The method of claim 1 comprising selecting a foam material that is compatible with a material of the insulating core of the composite panel.

5 7. The method of claim 1 comprising fixedly adhering the foam material to at least one side surface of an outer layer of the composite panel at the rough opening.

10 8. The method of claim 1 comprising selecting a low expansion adhesive foam.

15 9. The method of claim 1 wherein the step of delivering a foam material into a space includes delivering the foam material around at least a portion of the perimeter of the frame of the fenestration unit.

10. The method of claim 1 wherein the step of delivering the foam material includes delivering the foam material around the entire perimeter of the frame of the fenestration unit.

20 11. The method of claim 1 comprising attaching a fin on the frame of the fenestration unit to an outer surface of an outer layer of the composite panel.

25 12. The method of claim 11 comprising locating a sealant material between the fin and the outer surface of the outer layer.

13. The method of claim 11 comprising attaching the fin to the outer layer using fasteners.

14. The method of claim 1 comprising delivering the foam material into recesses located in the perimeter of the frame.

5 15. The method of claim 1 comprising applying an intermediate adhesion promoting material to at least one of the perimeter of the frame and the insulating core exposed by the rough opening.

10 16. The method of claim 1 comprising assembling the composite panel on-site.

17. The method of claim 1 comprising prefabricating the composite panel at a remote location.

15 18. The method of claim 1 wherein the step of creating the rough opening in the composite panel occurs on-site.

19. The method of claim 1 wherein the step of creating the rough opening in the composite panel occurs at a remote location.

20 20. The method of claim 1 wherein the insulating core comprises a polymeric foam material.

21. A method of installing a fenestration unit in a composite panel including an insulating core, the method comprising the steps of:  
25 creating a rough opening in the panel, the rough opening having a perimeter larger than a perimeter of a frame of the fenestration unit;  
positioning the fenestration unit inside the rough opening; and  
delivering a low expansion adhesive foam around at least a portion of the perimeter of the frame of the fenestration unit to fixedly adhere the  
30 fenestration unit to the insulating core of the composite panel, wherein the foam

provides a primary structural attachment between the fenestration unit and the composite panel when the foam material is substantially cured.

5                                22.     A wall structure comprising:  
                                 a fenestration unit including a frame;  
                                 a composite panel comprising an insulating core;  
                                 a rough opening created in the composite panel receiving the frame  
of the fenestration unit, the rough opening having a perimeter larger than a  
perimeter of the frame of the fenestration unit; and  
10                              a foam material deposited between at least a portion of the  
perimeter of the frame of the fenestration unit and the perimeter of the rough  
opening of the composite panel to fixedly adhere the fenestration unit to the  
insulating core of the composite panel.

15                              23.     The wall structure of claim 22 wherein the foam material  
provides a sole structural attachment between the fenestration unit and the  
composite panel when the foam material is substantially cured.

20                              24.     The wall structure of claim 22 wherein the foam material  
provides at least 50% of an attachment force that resists separation of the  
fenestration unit from the composite panel along a direction generally  
perpendicular to a major surface of the composite panel.

25                              25.     The wall structure of claim 22 wherein the foam material  
provides about 80% of an attachment force that resists separation of the  
fenestration unit from the composite panel along a direction generally  
perpendicular to a major surface of the composite panel.

30                              26.     The wall structure of claim 22 wherein the foam material  
provides about 95% of an attachment force that resists separation of the

fenestration unit from the composite panel along a direction generally perpendicular to a major surface of the composite panel.

5                   27.     The wall structure of claim 22 wherein the foam material is compatible with a material of the insulating core of the composite panel.

10                   28.     The wall structure of claim 22 wherein the foam material is fixedly adhered to at least one side surface of an outer layer of the composite panel at the rough opening.

                  29.     The wall structure of claim 22 wherein the foam material comprises a low expansion adhesive foam.

15                   30.     The wall structure of claim 22 wherein the foam material is delivered around at least a portion of the perimeter of the frame of the fenestration unit.

20                   31.     The wall structure of claim 22 wherein the foam material is delivered around the entire perimeter of the frame of the fenestration unit.

                  32.     The wall structure of claim 22 comprising a fin on the frame of the fenestration unit attached to an outer surface of an outer layer of the composite panel.

25                   33.     The wall structure of claim 32 comprising a sealant material located between the fin and the outer surface of the outer layer.

30                   34.     The wall structure of claim 32 comprising fasteners attaching the fin to one of the outer layers.

35. The wall structure of claim 22 comprising recesses located in the perimeter of the frame adapted to receive the foam material.

5 36. The wall structure of claim 22 comprising an intermediate adhesion promoting material applied to at least one of the perimeter of the frame and the perimeter of the rough opening.

10 37. The wall structure of claim 22 wherein the insulating core comprises a polymeric foam material

38. A wall structure comprising:  
a fenestration unit including a frame;  
a composite panel comprising an insulating core;  
a rough opening created in the composite panel receiving the frame  
15 of the fenestration unit, the rough opening having a perimeter larger than a perimeter of the frame of the fenestration unit; and  
a foam material deposited around at least a portion of the perimeter  
of the frame of the fenestration unit to fixedly adhere the fenestration unit to the  
insulating core of the composite panel, wherein the foam material provides the  
20 primary structural attachment between the fenestration unit and the composite panel.

25 39. A composite panel having an insulating core located between outer layers, the composite panel comprising a fenestration unit having a frame, wherein the frame of the fenestration unit is fixedly adhered to the insulating core of the composite panel by a foam material that is deposited between the frame and side surfaces of a rough opening of the composite panel.

40. The panel of claim 39 wherein the foam material provides the sole structural attachment between the fenestration unit and the composite panel.

5 41. The panel of claim 39 wherein the foam material is compatible with a material of the insulating core of the composite panel.

42. The panel of claim 39 wherein the foam material provides a primary structural attachment between the fenestration unit and the composite panel when the foam material is substantially cured.

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43. The panel of claim 39 wherein the foam material provides at least 50% of an attachment force that resists separation of the fenestration unit from the composite panel along a direction generally perpendicular to a major surface of the composite panel.

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44. The panel of claim 39 wherein the foam material provides about 80% of an attachment force that resists separation of the fenestration unit from the composite panel along a direction generally perpendicular to a major surface of the composite panel.

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45. The panel of claim 39 comprising an intermediate adhesion promoting material applied to at least one of the frame and the insulating core exposed by the rough opening.

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46. The panel of claim 39 wherein the insulating core comprises a polymeric foam material.